

Ingersoll-Rand®

Pneumatic Angle Drills P33 Series

NEW
36 high precision
Angle Drills



*Pneumatic drills
with non-lube
motor*

Pneumatic Angle Drills P33 Series

As an extension of its range of modular drills, Ingersoll-Rand is introducing its new range of angle drills.

This new range provides the best flexible answer for requirements of precise drilling of high technology materials for the Aerospace Industry.



The P33 range is produced in our ISO 9001 certified plant

(AFAQ certificate no. v2000/1998/9056b available on request)

1 Choice of three different angle heads

The new P33 drills are available in 3 different angle configurations: 30°, 90° and 180°. Each angle head can easily be oriented through 360° using a simple nut / lock nut system.

The P33 drills fit perfectly into any kind of application and the design of the angle heads makes their orientation simple.

Superior drilling quality is achieved through engineered excellence on the angle heads.



*P33032-DASL180P64
model.
Real scale*

2 Size of collets

The angle heads are available for two different sizes of collets. P45 threaded collets for drilling bits from 1 to 4.5 mm, dedicated to small hole diameters with difficult access – P64 plain collets for drill bits from 1.6 to 6.4 mm offering greater precision (please refer to the list of available collets on the last page).



3 High precision gearing

The quality of the reduction gearing provides an efficient transmission of power with a very low level of vibration. Combined with the 330-Watts output of the motor, the various gearing offers a perfect adaptation to drilling conditions with speed from 660 rpm to 5400 rpm.

6 speed are available for each angle head configuration :

660 rpm	2200 rpm
1100 rpm	3200 rpm
1600 rpm	5400 rpm

5 Variable speed control

Thanks to a progressive lever control, the drilling speed can be adjusted by the operator for an outstanding quality of operation and result. All models can be equipped with a safety lever available as an option.



4 Soft-touch, non slip grip

The housing of each P33 drill is covered by a soft touch non-slip grip. This protects the operator's hand from the metal body and reduces the vibration while providing a perfect hold of the tool.

The P33 drills offer as an option a hanger so that the drill can be suspended in between operations.



6 Non-lube motor

With a 330 Watt motor, the P33 drill offers the best in class weight / output ratio. This is due to the use of non-lube vanes, this high level of efficiency is guaranteed in a real "non-lube" environment. Finally, the maintenance of this motor couldn't be easier. Changing the vanes only takes 10 minutes.

Easy maintenance

Spare part tune up kits is available for simple and efficient maintenance of each tool. Special jigs to ease and speed-up maintenance or repair operations are also available.

Finally, for a cost-effective management of a large number of tools, both modular and non-modular P33 drills share 95% of their spare parts.

Pneumatic Angle Drills – P33 Series

Accessories and available configurations in the range

The P33 drills are also available in modular versions

The outstanding flexibility of the modular series lies in its patented mechanism of attachment between various motors and angle heads, and its own ability to be oriented in many ways. This system allows the operator to modify the configuration of the tool within a few seconds by positioning the angle head in a chosen angle compared to the motor (18 positions, every 20°).

On these modular series, all attachments and motors are fully interchangeable and thus allow the tool to perfectly fit both material and speed configurations of each drilling operation.



Collets for P33 angle drills

(P33 drills are delivered without any collet)



Threaded collets for drill designation determined by P45

Plain collets for drill designation determined by P64

Ø (mm)	Part no.	Ø (mm)	Part no.
1.0	120071	1.6	128250
1.5	120072	1.8	128251
2.0	120073	2.0	128252
2.2	120102	2.2	128253
2.4	120106	2.4	128254
2.5	120074	2.6	128255
3.0	120075	2.8	128256
3.1	120105	3.0	128257
3.2	120109	3.2	128258
3.25	120104	3.4	128259
3.3	120113	3.6	128260
3.5	120076	3.8	128261
3.6	123991	4.0	128262
3.7	121552	4.2	128263
3.8	125783	4.4	128264
3.9	120107	4.6	128265
4.0	120077	4.8	128266
4.1	120103	5.0	128267
4.2	120110	5.2	128268
4.5	120078	5.4	128269
–	–	5.6	128270
–	–	5.8	128271
–	–	6.0	128272
–	–	6.2	128273
–	–	6.4	128274

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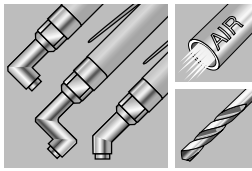
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P33 Series



Non-Lube Air Angle Drills Perceuses d'Angle Pneumatiques Non Lubrifiées Ölfreie, Druckluft-Bohrmaschinen Taladros Angulares Neumáticos Sin Lubricación Trapani Pneumatici ad Angolo Non Lubrificati

Standard Equipment

Lube free motor	Moteur non lubrifié	Ölfreier Motor	Motor sin lubricación	Motore senza lubrificazione
Variable speed control	Contrôle de la vitesse	Variable Geschwindigkeitkontrolle	Gatillo de velocidad variable	Grilletto a velocità variabile






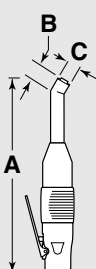







P33022-DASL090P45



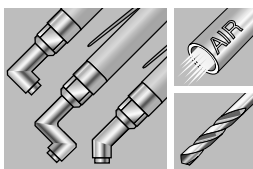
Models with 30° and 90° angle head
Modèles avec tête d'angle à 30° et 90°
Modelle mit 30°-und 90° Winkelkopf
Modelos con cabeza angular 30° y 90°
Modelli con testa ad angolo 30° e 90°

@ 620 kPa (90 psi)

Ref. No.	 1 min. rpm	 Max. Nm	 kg	 Min.- Max. mm	A mm	B mm	C mm	 l/min	
WITH 30° ANGLE HEAD — AVEC TÊTE D'ANGLE À 30° — MIT 30° WINKELKOPF — CON CABEZA ANGULAR 30° — CON TESTA AD ANGOLO 30°									
	P33006-DASL030P45	660	16	880	1.0 - 4.5	284	19.5	17	600
	P33006-DASL030P64	660	16	880	1.6 - 6.4	296	31.5	17	600
	P33011-DASL030P45	1100	9.5	880	1.0 - 4.5	284	19.5	17	600
	P33011-DASL030P64	1100	9.5	880	1.6 - 6.4	296	31.5	17	600
	P33016-DASL030P45	1600	6.8	880	1.0 - 4.5	284	19.5	17	600
	P33016-DASL030P64	1600	6.8	880	1.6 - 6.4	296	31.5	17	600
	P33022-DASL030P45	2200	4.5	770	1.0 - 4.5	269	19.5	17	600
	P33022-DASL030P64	2200	4.5	770	1.6 - 6.4	281	31.5	17	600
	P33032-DASL030P45	3200	3.2	760	1.0 - 4.5	269	19.5	17	600
	P33032-DASL030P64	3200	3.2	760	1.6 - 6.4	281	31.5	17	600
P33054-DASL030P45	5400	1.9	760	1.0 - 4.5	269	19.5	17	600	
P33054-DASL030P64	5400	1.9	760	1.6 - 6.4	281	31.5	17	600	
WITH 90° ANGLE HEAD — AVEC TÊTE D'ANGLE À 90° — MIT 90° WINKELKOPF — CON CABEZA ANGULAR 90° — CON TESTA AD ANGOLO 90°									
	P33006-DASL090P45	660	16	880	1.0 - 4.5	277	31	17	600
	P33006-DASL090P64	660	16	890	1.6 - 6.4	277	43	17	600
	P33011-DASL090P45	1100	9.5	880	1.0 - 4.5	277	31	17	600
	P33011-DASL090P64	1100	9.5	890	1.6 - 6.4	277	43	17	600
	P33016-DASL090P45	1600	6.8	880	1.0 - 4.5	277	31	17	600
	P33016-DASL090P64	1600	6.8	890	1.6 - 6.4	277	43	17	600
	P33022-DASL090P45	2200	4.5	770	1.0 - 4.5	262	31	17	600
	P33022-DASL090P64	2200	4.5	780	1.6 - 6.4	262	43	17	600
	P33032-DASL090P45	3200	3.2	760	1.0 - 4.5	262	31	17	600
	P33032-DASL090P64	3200	3.2	770	1.6 - 6.4	262	43	17	600
P33054-DASL090P45	5400	1.9	760	1.0 - 4.5	262	31	17	600	
P33054-DASL090P64	5400	1.9	770	1.6 - 6.4	262	43	17	600	

Series / Baureihe				
P33	0.33 kW	76 dBa	1/4" BSP	9 mm

P33 Series



Non-Lube Air Angle Drills (continued) Perceuses d'Angle Pneumatiques Non Lubrifiées (suite) Ölfreie, Druckluft-Bohrmaschinen (Fortsetzung) Taladros Angulares Neumáticos Sin Lubricación (continuación) Trapani Pneumatici ad Angolo Non Lubrificati (seguito)

Models with 180° angle head
 Modèles avec tête d'angle à 180°
 Modelle mit 180° Winkelkopf
 Modelos con cabeza angular 180°
 Modelli con testa ad angolo 180°



@ 620 kPa (90 psi)

Ref. No.	1 min.	Max Nm	kg	Min.-Max.	A	B	C	D	l/min	
	rpm	Nm	kg	mm	mm	mm	mm	mm		
WITH 180° ANGLE HEAD — AVEC TÊTE D'ANGLE À 180° — MIT 180° WINKELKOPF — CON CABEZA ANGULAR 180° — CON TESTA AD ANGOLO 180°										
	P33006-DASL180P45	660	16	940	1.0 - 4.5	292	63.2	17	31	600
	P33006-DASL180P64	660	16	960	1.6 - 6.4	304	63.2	17	43	600
	P33011-DASL180P45	1100	9.5	940	1.0 - 4.5	292	63.2	17	31	600
	P33011-DASL180P64	1100	9.5	960	1.6 - 6.4	304	63.2	17	43	600
	P33016-DASL180P45	1600	6.8	940	1.0 - 4.5	292	63.2	17	31	600
	P33016-DASL180P64	1600	6.8	960	1.6 - 6.4	304	63.2	17	43	600
	P33022-DASL180P45	2200	4.5	830	1.0 - 4.5	277	63.2	17	31	600
	P33022-DASL180P64	2200	4.5	850	1.6 - 6.4	289	63.2	17	43	600
	P33032-DASL180P45	3200	3.2	820	1.0 - 4.5	277	63.2	17	31	600
	P33032-DASL180P64	3200	3.2	840	1.6 - 6.4	289	63.2	17	43	600
	P33054-DASL180P45	5400	1.9	820	1.0 - 4.5	277	63.2	17	31	600
	P33054-DASL180P64	5400	1.9	840	1.6 - 6.4	289	63.2	17	43	600

Series / Baureihe				
P33	0.33 kW	76 dBa	1/4" BSP	9 mm

Accessories Accessoires Zubehör Accesorios Accessori



Threaded collets forP45 heads
 Pince filettée pour têtesP45
 Gewinde-Spannz. fürP45 köpfe
 Pinza roscada para cabezasP45
 Pinza filettata per testeP45

Plain collets forP64 heads
 Pince conique pour têtesP64
 Spannz. ohne Gewinde fürP64 köpfe
 Pinza sencilla para cabezasP64
 Pinza non filettata per testeP64

Self-locking lever Levier de sécurité Sicherheits-Starthebel Palanca auto-blocante Leva autoserrante	131655
Vertical hanger Suspension verticale Vertikalaufhänger Suspensión vertical Sospensione verticale	128065

Ø mm	Ref. No.	Ø mm	Ref. No.
1.0	120071	3.3	120113
1.5	120072	3.5	120076
2.0	120073	3.6	123991
2.2	120102	3.7	121552
2.4	120106	3.8	125783
2.5	120074	3.9	120107
3.0	120075	4.0	120077
3.1	120105	4.1	120103
3.17	120101	4.2	120110
3.25	120104	4.5	120078

Ø mm	Ref. No.	Ø mm	Ref. No.
1.6	128250	4.0	128262
1.8	128251	4.2	128263
2.0	128252	4.4	128264
2.2	128253	4.6	128265
2.4	128254	4.8	128266
2.6	128255	5.0	128267
2.8	128256	5.2	128268
3.0	128257	5.4	128269
3.2	128258	5.6	128270
3.4	128259	5.8	128271
3.6	128260	6.0	128272
3.8	128261	6.2	128273
		6.4	128274